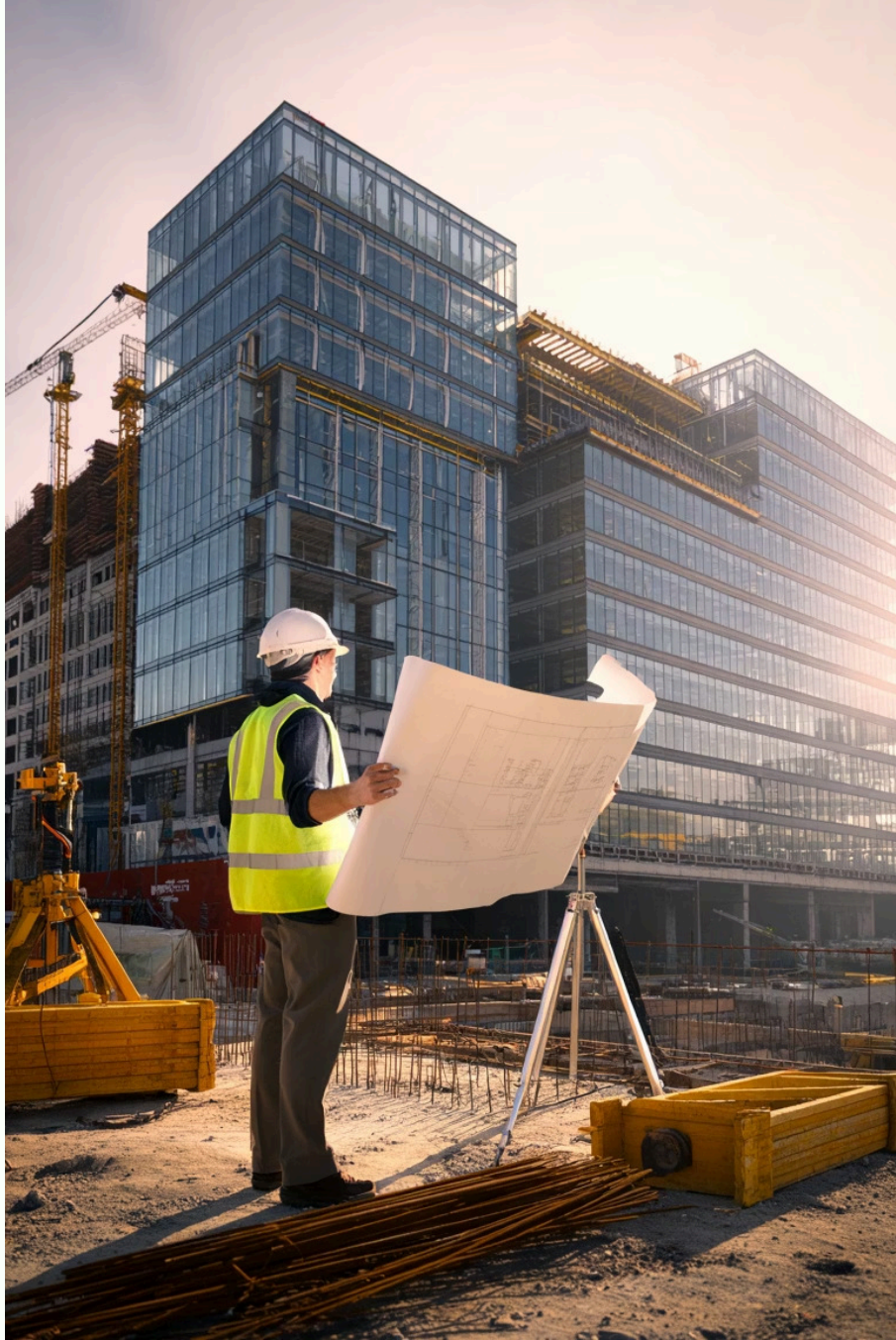
Before You Break Ground

The Essential **Architectural Scanning Checklist** for US Renovations

PRE-CONSTRUCTION GUIDE



The High Cost of "Guessing"

$600B Market

Renovations represent a massive opportunity – but also enormous exposure when assumptions replace data.

Budget Overruns

Incomplete data leads to costly rework, project delays, and contractor disputes that derail timelines.

Geometric Truth

The goal is to capture the precise as-built reality of your asset *before* a single wall comes down.

PHASE 1

Logistics & Access — The Week Before

1

Clearance & Badging

Confirm all scanning personnel hold required security clearances and have active site badges in hand.

2

Keys & Fobs

Arrange master access for mechanical rooms, roof hatches, and any restricted areas within scope.

3

Notify Occupants

Brief tenants and staff on the scanning schedule to prevent interference and minimize confusion.

4

Schedule Off-Peak

Book high-traffic areas during low-occupancy windows to eliminate "ghosting" in point cloud data.

PHASE 2

Physical Environment — The Day Before

De-Clutter Ruthlessly

Remove boxes and stored materials that create data gaps and shadow occlusions.

Clear Sightlines

Ensure unobstructed access to baseboards and corners for accurate room geometry capture.

Consolidate Materials

Gather scattered construction materials into central piles on active job sites.

Clean Glass Surfaces

Wipe windows and glass partitions to reduce laser noise and reflection artifacts.

PHASE 3

Door & Window Management — Critical Connectivity

One of the most overlooked steps — yet one of the most impactful on scan quality.

Prop All Doors Open

Every door within scope must be held open at **45-90 degrees** throughout the scanning session.

Capture Door Geometry

Open doors allow scanners to record full frame geometry and **see into adjacent spaces** seamlessly.

Enable Registration

Proper door positioning is **essential for stitching** multiple scans together into one accurate model.

Uncovering Hidden Histories

Documentation you find early is data you don't have to scan twice.

Existing Drawings

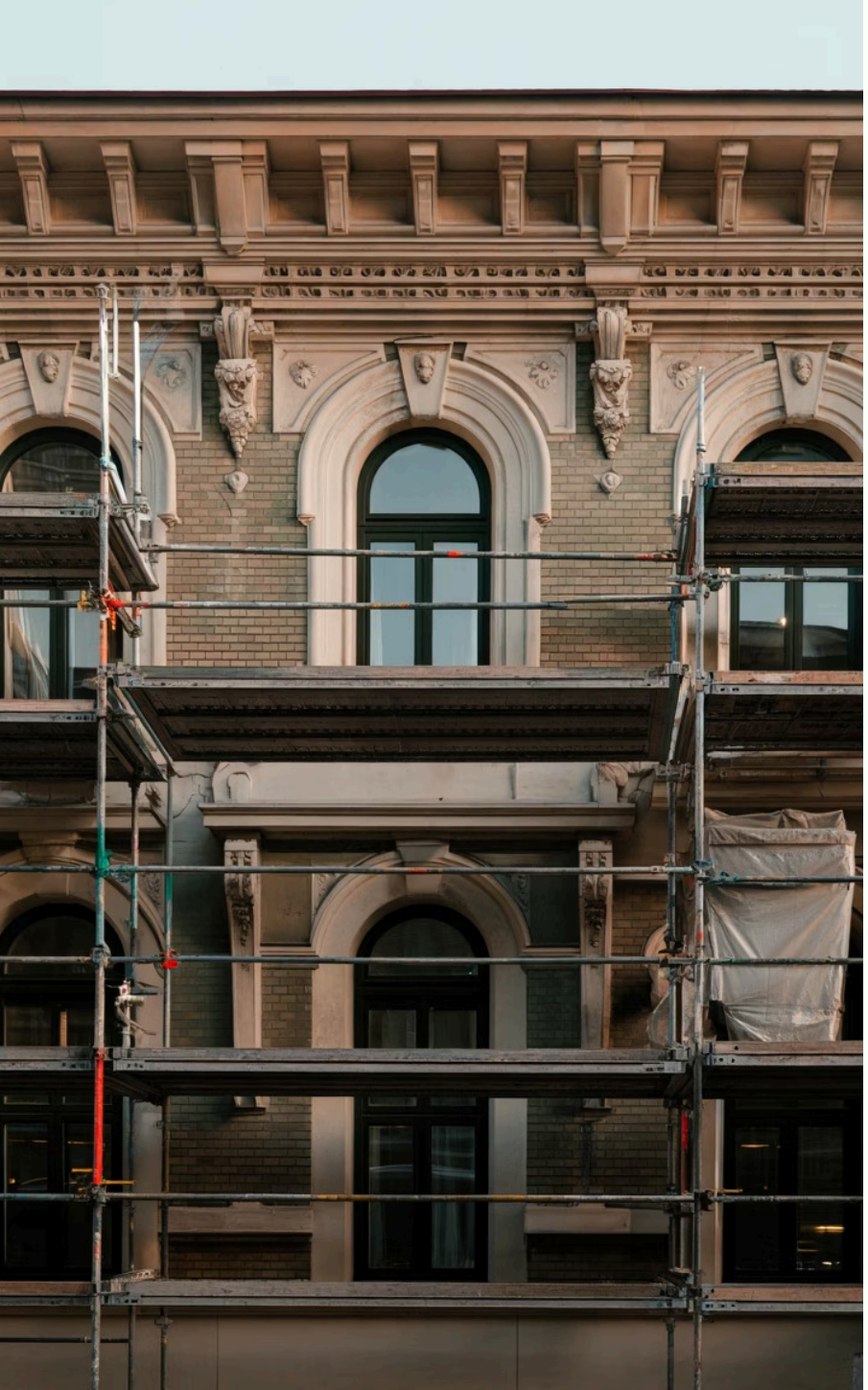
Search attics, basements, and municipal building permit archives for original construction documents – they may reveal structural surprises.

Real Estate Plans

Even basic listing floor plans can anchor your scanning effort and save significant modeling time.

Equipment Stickers

HVAC, plumbing, and electrical panels often carry vendor stickers – a gateway to historical service records.



Historic Structures: A Special Consideration

Designation Check

Verify if the building holds local landmark status or is listed on the National Register of Historic Places.

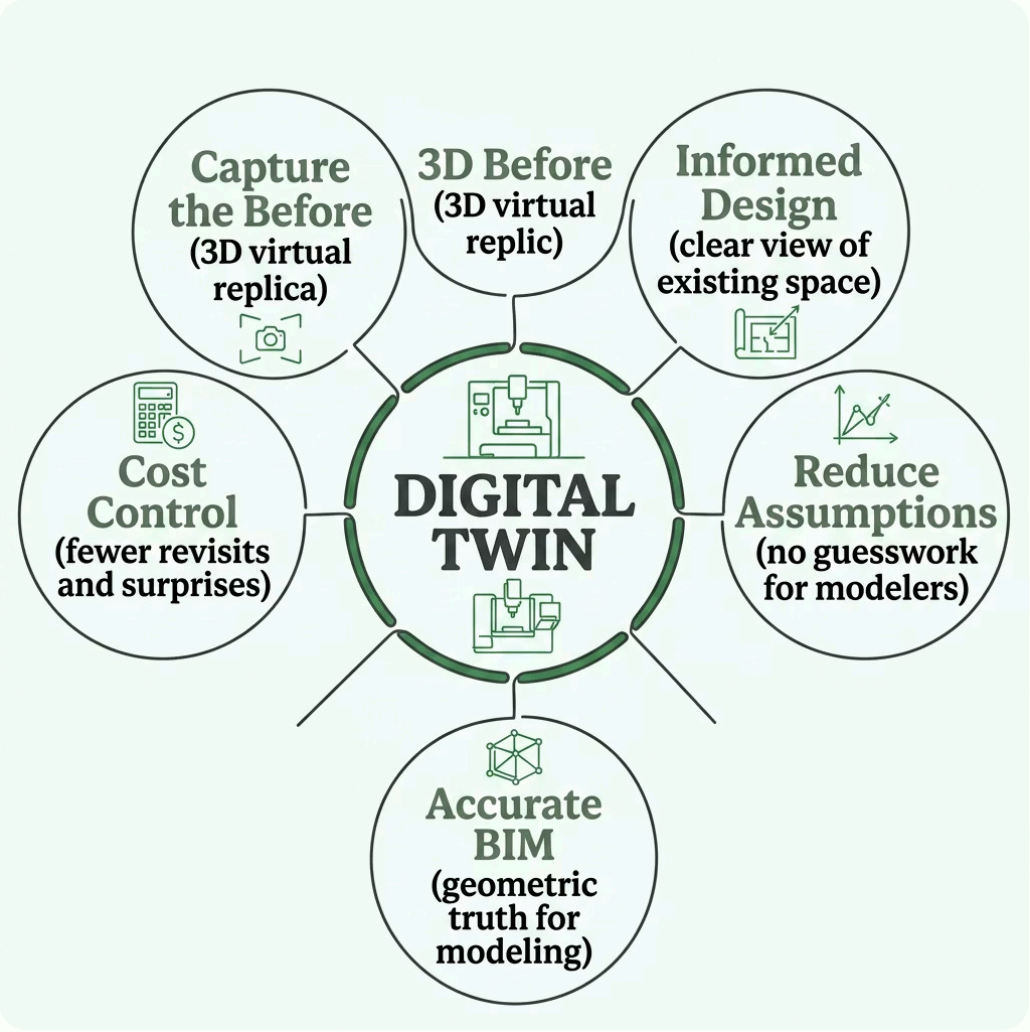
Legal Requirements

Review easements and local ordinances that may govern – or restrict – proposed alterations to the structure.

Preservation Standards

All work must align with the *Secretary of the Interior's Standards* for rehabilitation of historic buildings.

The Power of a Digital Twin



From Physical to Virtual

Platforms like **Matterport** **translate** your existing space into a precise 3D virtual replica – your single source of truth before any design decisions are made.

A digital twin eliminates the guesswork that introduces risk. Modelers work from reality, not assumptions.

Chaos vs. Clarity

The difference between a cluttered, unprepared site and a meticulously organized one isn't just aesthetic – it's the difference between **accurate data** and costly re-scans.

A prepared site is your first deliverable. Treat it like one.

Benefits of a Prepared Site

30%

Faster Capture

Well-prepared sites reduce scanning time by 20 - 30%, keeping projects on schedule.

↓ 0

Occlusion Shadows

Clearing obstructions eliminates data gaps that force modelers to make dangerous assumptions.

↑ BIM

Modeling Accuracy

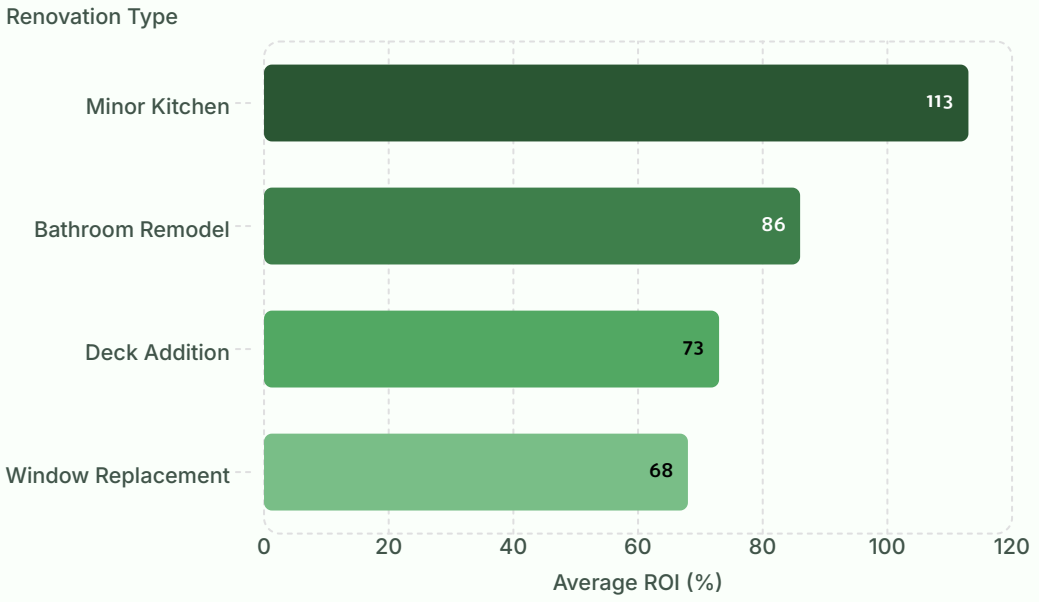
A clean point cloud reflects true geometric reality – ensuring your BIM model is construction-ready.

$0

Revisit Cost

Thorough prep prevents expensive return trips and the rework they always bring with them.

The ROI of Reality Capture



Accurate Data = Smart Investment

A **minor kitchen renovation averaged 113% ROI in 2025** – but only when executed on reliable as-built data.

Investing in thorough pre-scanning ensures every renovation dollar is allocated with precision, not guesswork. High-fidelity scan data is the foundation that transforms vision into verified reality.

Reality capture pays for itself before construction even begins.

Scan Smart, Build Strong

Meticulous site preparation and architectural scanning are not optional steps – they are **critical investments** that protect your timeline, your budget, and your design intent.

Prepare Thoroughly

Access, clearance, de-cluttering, and documentation – done before day one.

Scan Accurately

Capture geometric truth with a digital twin that leaves nothing to assumption.

Break Ground with Confidence

Start construction knowing your data is complete, verified, and ready to build from.